

Practice: 612 - Tree & Shrub Establishment**Scenario: #1 - Hardwood Establishment, Direct Seeding****Scenario Description:**

This practice involves planting of tree and shrubs through direct seeding after the site has been prepared for seedling growth and establishment. Planting rate will be approximately 3000 seed per acre. The productivity of the site is good and will handle a medium density planting rate. The resource concerns addressed is degraded plant condition -- undesirable plant productivity and health, and inadequate structure and composition and degraded wildlife habitat. Payment includes tree seed, equipment and labor to seed, and foregone income for the land taken out of crop production. Site preparation is implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching

Before Situation:

The land has a little or no tree cover and has been intensively row cropped. Soil condition is degraded due to the loss of the native forest ecosystem (organic matter in top soil depleted). Native wildlife habitat is lacking. The main resource concern is degraded plant condition and inadequate structure and composition

After Situation:

Seed from native species are collected or purchased and planted at prescribed rates. 5 acres of land is established with permanent tree cover that will improve degraded plant condition, reduce soil erosion, establish wildlife habitat, sequester carbon and reduce invasive species presence. Establishing forest vegetation also creates corridors for wildlife movement.

Scenario Feature Measure: Area of Treatment

Scenario Unit: Acre

Scenario Typical Size: 5

Scenario Cost: \$4,044.25

Scenario Cost/Unit: \$808.85

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$37.62	8	\$300.96
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$23.73	8	\$189.84
Mechanical nut planter	1601	Mechanical nut planter for direct seeding of trees and shrubs. Requires a pulling unit of either tractor or small dozer depending upon site conditions. Does not include labor.	Hour	\$1.99	8	\$15.92
Foregone Income						
FI, Corn Dryland	1959	Dryland Corn is Primary Crop	Acre	\$432.87	2.5	\$1,082.18
FI, Soybeans Dryland	1961	Dryland Soybeans is Primary Crop	Acre	\$426.49	2.5	\$1,066.23
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.06	8	\$176.48
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$37.40	8	\$299.20
Materials						
Trees and shrubs, seed	1871	Tree or shrub seed, e.g., acorns, to establish trees. Includes materials and shipping only.	Pound	\$4.35	150	\$652.50
Mobilization						
Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$260.95	1	\$260.95

Practice: 612 - Tree & Shrub Establishment**Scenario: #6 - Bareroot Tress and Shrubs, Each****Scenario Description:**

Bare-root trees and/or shrubs to be planted or interplanted to establish woody plants in any area where they can be grown for wildlife, erosion control, water quality improvement, carbon sequestration, forest products, and aesthetics. Resource concerns addressed are degraded plant condition -- undesirable plant productivity and health, and inadequate structure and composition and degraded wildlife habitat. Payment includes bare-root seedlings and equipment and labor to plant. Foregone income is not included with this scenario. Site preparation is implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching.

Before Situation:

The land has little/no tree cover, is understocked, or is stocked with the wrong tree species. Competing vegetation is a before and after planting concern. Soil condition is degraded due to the loss of the native forest ecosystem (organic matter in top soil depleted). The main resource concerns are degraded plant condition and inadequate structure and composition

After Situation:

The land is established with permanent tree cover that will improve degraded plant condition, reduce soil erosion, establish wildlife habitat, sequester carbon and reduce invasive species presence. Establishing forest vegetation also creates corridors for wildlife movement.

Scenario Feature Measure: Area of Treatment

Scenario Unit: Each

Scenario Typical Size: 4,360

Scenario Cost: \$3,230.11

Scenario Cost/Unit: \$0.74

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Mechanical tree planter	1600	Mechanical tree planter. Requires a pulling unit of either tractor or small dozer depending upon site conditions. Does not include labor.	Hour	\$6.37	4	\$25.48
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$37.62	4	\$150.48
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$23.73	4	\$94.92
Trailer, enclosed, small	1503	Small enclosed trailer (typically less than 30' in length) pulled by a pickup to transport materials and equipment. Truck not included.	Hour	\$3.64	4	\$14.56
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	4	\$89.72
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$37.40	4	\$149.60
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.06	4	\$88.24
Materials						
Tree, hardwood, seedling or transplant, bare root, 16-36"	1510	Bare root hardwood trees 18-36" tall. Includes materials and shipping only.	Each	\$0.56	4360	\$2,441.60
Mobilization						
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$175.51	1	\$175.51

Practice: 612 - Tree & Shrub Establishment**Scenario: #7 - Bareroot Tress and Shrubs with tree shelters, Each****Scenario Description:**

Bare-root trees and/or shrubs to be planted or interplanted to establish woody plants in any area where they can be grown for wildlife, erosion control, water quality improvement, carbon sequestration, forest products, and aesthetics. Seedlings are protected from deer browsing by installing tree tube shelters. Resource concerns addressed are degraded plant condition -- undesirable plant productivity and health, and inadequate structure and composition and degraded wildlife habitat. Payment includes bare-root seedlings, tree shelters, and equipment and labor to plant and install shelters. Foregone income is not included with this scenario. Site preparation is implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching.

Before Situation:

The land has little/no tree cover, is understocked, or is stocked with the wrong tree species. Competing vegetation is a before and after planting concern. Soil condition is degraded due to the loss of the native forest ecosystem (organic matter in top soil depleted). The main resource concerns are degraded plant condition and inadequate structure and composition

After Situation:

The land is established with permanent tree cover that will improve degraded plant condition, reduce soil erosion, establish wildlife habitat, sequester carbon and reduce invasive species presence. Establishing forest vegetation also creates corridors for wildlife movement.

Scenario Feature Measure: Area of Treatment**Scenario Unit:** Each**Scenario Typical Size:** 4,360**Scenario Cost:** \$14,440.35**Scenario Cost/Unit:** \$3.31**Cost Details (by category):**

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Mechanical tree planter	1600	Mechanical tree planter. Requires a pulling unit of either tractor or small dozer depending upon site conditions. Does not include labor.	Hour	\$6.37	4	\$25.48
Trailer, enclosed, small	1503	Small enclosed trailer (typically less than 30' in length) pulled by a pickup to transport materials and equipment. Truck not included.	Hour	\$3.64	4	\$14.56
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$37.62	4	\$150.48
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$23.73	4	\$94.92
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$37.40	4	\$149.60
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	12	\$269.16
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.06	4	\$88.24
Materials						
Stakes, wood, 3/4" x 3/4" x 36"	1581	3/4" x 3/4" x 36" wood stakes to fasten items in place. Includes materials only.	Each	\$0.70	4360	\$3,052.00
Cable ties, plastic	1575	Plastic cable ties (typ. 8-12") to assist in securing items. Materials only.	Each	\$0.05	8720	\$436.00
Tree, hardwood, seedling or transplant, bare root, 16-36"	1510	Bare root hardwood trees 18-36" tall. Includes materials and shipping only.	Each	\$0.56	4360	\$2,441.60
Tree shelter, solid tube type, 3-1/4" x 30"	1560	3-1/4" x 30" tree tube for protection from animal damage. Materials only.	Each	\$1.73	4360	\$7,542.80

Mobilization

Mobilization

Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$175.51	1	\$175.51
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Practice: 612 - Tree & Shrub Establishment**Scenario: #12 - Container Tress and Shrubs (3 gallon), Each****Scenario Description:**

Containerized trees and/or shrubs (potted) to be planted or interplanted to establish woody plants in any area where they can be grown for wildlife, erosion control, water quality improvement, carbon sequestration, forest products, and aesthetics. Resource concerns are degraded plant condition - undesirable productivity and health, and Inadequate structure and composition; inadequate habitat for fish and wildlife. Payment includes 3 gallon containerized plants and equipment and labor to plant. Foregone income is not included with this scenario. Site preparation is implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching.

Before Situation:

The land has little/no tree cover, is understocked, or is stocked with the wrong tree species. Competing vegetation is a before and after planting concern. Soil condition is degraded due to the loss of the native forest ecosystem (organic matter in top soil depleted). The main resource concerns are degraded plant condition and inadequate structure and composition

After Situation:

The land is established with permanent tree cover that will improve degraded plant condition, reduce soil erosion, establish wildlife habitat, sequester carbon and reduce invasive species presence. Establishing forest vegetation also creates corridors for wildlife movement.

Scenario Feature Measure: Area of Treatment

Scenario Unit: Each

Scenario Typical Size: 100

Scenario Cost: \$1,115.30

Scenario Cost/Unit: \$11.15

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Hand tools, tree planting	1590	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only. Labor not included.	Hour	\$11.22	6	\$67.32
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	6	\$134.58
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$37.40	6	\$224.40
Materials						
Tree, hardwood, seedling or transplant, potted or B&B, 2-3 gal.	1532	Potted or balled and burlapped hardwood tree, 2-3 gal. Includes materials and shipping only.	Each	\$6.89	100	\$689.00

Practice: 612 - Tree & Shrub Establishment**Scenario: #13 - Container Tress and Shrubs (3 gallon) with tree shelters, Each****Scenario Description:**

Containerized trees and/or shrubs (potted) to be planted or interplanted to establish woody plants in any area where they can be grown for wildlife, erosion control, water quality improvement, carbon sequestration, forest products, and aesthetics. Seedlings are protected from deer browsing by installing tree tube shelters. Resource concerns are degraded plant condition - undesirable productivity and health, and Inadequate structure and composition; inadequate habitat for fish and wildlife. Payment includes 3 gallon containerized plants, tree shelters, and equipment and labor to plant and install tree shelters. Foregone income is not included with this scenario. Site preparation is implemented through associated practice 490 Tree/Shrub Site Preparation. Additional associated practices may include: 315 Herbaceous Weed Control, 660 Tree/Shrub Pruning, 484 Mulching.

Before Situation:

The land has little/no tree cover, is understocked, or is stocked with the wrong tree species. Competing vegetation is a before and after planting concern. Soil condition is degraded due to the loss of the native forest ecosystem (organic matter in top soil depleted). The main resource concerns are degraded plant condition and inadequate structure and composition

After Situation:

The land is established with permanent tree cover that will improve degraded plant condition, reduce soil erosion, establish wildlife habitat, sequester carbon and reduce invasive species presence. Establishing forest vegetation also creates corridors for wildlife movement.

Scenario Feature Measure: Area of Treatment**Scenario Unit:** Each**Scenario Typical Size:** 100**Scenario Cost:** \$1,615.88**Scenario Cost/Unit:** \$16.16**Cost Details (by category):**

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Hand tools, tree planting	1590	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only. Labor not included.	Hour	\$11.22	6	\$67.32
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$37.40	6	\$224.40
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.43	12	\$269.16
Materials						
Tree, hardwood, seedling or transplant, potted or B&B, 2-3 gal.	1532	Potted or balled and burlapped hardwood tree, 2-3 gal. Includes materials and shipping only.	Each	\$6.89	100	\$689.00
Stakes, wood, 3/4" x 3/4" x 60"	1583	3/4" x 3/4" x 60" wood stakes to fasten items in place. Includes materials only.	Each	\$1.52	100	\$152.00
Cable ties, plastic	1575	Plastic cable ties (typ. 8-12") to assist in securing items. Materials only.	Each	\$0.05	200	\$10.00
Tree shelter, solid tube type, 5" x 48"	1571	5" x 48" tree tube for protection from animal damage. Materials only.	Each	\$2.04	100	\$204.00